

State of California
AIR RESOURCES BOARD

PROPOSED

**CALIFORNIA REFUELING EMISSION STANDARDS AND TEST PROCEDURES
FOR 2001 AND SUBSEQUENT MODEL MOTOR VEHICLES**

Adopted: _____

Note: Although the following test procedure applies to 2001 and subsequent model motor vehicles, the emission standards and test procedures referred to herein are no different from those contained in the "California Refueling Emission Standards and Test Procedures for 1998-2000 Model Motor Vehicles." These test procedures are being revised solely to conform to the new 40 CFR Subpart S sections recently promulgated by U.S. EPA.

Date of Release: 4/15/98 **PRELIMINARY DRAFT**
Board hearing: 11/5/98

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The provisions of Title 40, Code of Federal Regulations (CFR), Part 86, Subparts B and S, (as adopted or amended by the U.S. Environmental Protection Agency (U.S. EPA) on the date listed) to the extent they pertain to the testing and compliance of vehicle refueling emissions for passenger cars, light-duty trucks and medium-duty vehicles, are hereby adopted as the "California Refueling Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles" with the following exceptions and additions.

Subpart S Requirements

I. General Certification Requirements for Refueling Emissions

A. Applicability

1. These refueling standards and test procedures are applicable to all new 2001 and subsequent model gasoline, alcohol, diesel, and hybrid electric passenger cars, light-duty trucks and medium-duty vehicles with a gross vehicle weight rating of less than 8,501 lbs. Gaseous fueled vehicles are exempt from meeting these refueling standards. In cases where a provision applies only to a certain vehicle group based on its model year, vehicle class, motor fuel, engine type, or other distinguishing characteristics, the limited applicability is cited in the appropriate section or paragraph.

2. For general certification purposes, the requirements set forth in the "California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles" shall apply, except as otherwise noted in these test procedures.

3. Reference to vehicle sales through the United States shall mean vehicle sales in California, except when certifying to the refueling standards, in which case, vehicle sales shall mean throughout the United States.

4. Regulations concerning U.S. EPA hearings, inspections, specific language on the Certificate of Conformity, evaporative emissions, high altitude vehicles and testing, alternative useful life, and selective enforcement audit shall not be applicable to these procedures, except where specifically noted.

5. In those instances where testing conditions or parameters are not practical or feasible for vehicles certified to the refueling standards, the manufacturer shall provide a test

plan that provides equal or greater confidence in comparison to these test refueling procedures. The test plan must be approved in advance by the Executive Officer.

6. The term “[no change]” means that these test procedures do not modify the applicable federal requirement.

B. Definitions, Acronyms

These test procedures incorporate by reference the definitions set forth in the Code of Federal Regulations and the definitions as set forth in the “California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles.”

C. Useful Life

1. Delete §86.1805-01 and replace with:

“Useful life” shall have the same meaning as provided in Title 13, CCR, §2112. Approval of vehicles that are not exhaust emissions tested using a chassis dynamometer pursuant to Title 13, CCR, §1961 shall be based on an engineering evaluation of the system and data submitted by the applicant. The useful life of incomplete medium-duty vehicles certified to the “California Exhaust Emission Standards and Test Procedures for 1987 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles,” shall be defined by the useful life of the medium-duty engine used in such vehicles.

D. On-Board Diagnostics

1. Delete §86.1806 and replace with:

The “Malfunction and Diagnostic System Requirements for 1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles and Engines” as set forth in Title 13, CCR, Section 1968.1, is hereby incorporated by reference into this test procedure. For purposes of this test procedure, all references to evaporative system monitoring, malfunction criteria, and MIL illumination and fault code storage shall also apply to refueling systems.

E. General Standards, increase in emissions; unsafe conditions

1. Amend §§86.1810-01 and 86.1810-04 as follows:

1.1 (a) through (j). [No change, unless otherwise specified in the “California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model

Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles” or “California Evaporative Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles.”]

1.2 (k) Refueling emissions general provisions. [No change.]

1.3 (l) Fuel dispensing spitback testing waiver. Amend as follows:

1.3.1 In addition to the requirements contained in subparagraph (1), manufacturers shall demonstrate compliance with the fuel spillage test requirements contained in the ARB’s Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks, as last amended January 22, 1990, which is incorporated by reference herein.

2. In addition to the provisions set forth in these test procedures, the ARB reserves the authority to require testing to enforce compliance and to prevent noncompliance with the refueling emission standard. Vehicles not certified to the refueling emission standards set forth in Section E below, shall not be counted in the phase-in sales percentage compliance determinations.

F. Emission Standards

1. Delete §§86.1811 through 86.1815 (all years).

2. The maximum projected refueling emissions for 2001 and subsequent model gasoline-fueled, alcohol-fueled, diesel-fueled, fuel-flexible, and hybrid electric passenger cars, light-duty trucks and medium-duty vehicles with a gross vehicle weight rating less than 8,501 lbs. for the full useful life are:

2.1 0.20 grams hydrocarbons per gallon of fuel dispensed. [For purposes of these test procedures, hydrocarbons shall mean organic material hydrocarbon equivalent for alcohol-fueled vehicles.]

2.2 Vehicles powered by diesel fuel are not required to conduct testing to demonstrate compliance with the refueling emission standards set forth above, provided that all of the following provisions are met:

(A) The manufacturer can attest to the following evaluation: “Due to the low vapor pressure of diesel fuel and the vehicle tank temperatures, hydrocarbon vapor concentrations are low and the vehicle meets the 0.20 grams/gallon refueling emission standard without a control system.”

(B) The certification requirement described in paragraph (A) is provided in writing and applies for the full useful life of the vehicle.

Subpart B - Emission Regulations for 1977 and Later Model Year New Light-Duty Vehicles and New Light-Duty Trucks; Test Procedures

[Sections 86.101 through 86.145 and Appendix I (UDDS Schedule) of this Subpart B, as incorporated by reference and amended in the “California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles,” are hereby incorporated by reference herein.]

Refueling Test Procedures

- 86.146-96 Fuel dispensing spitback procedure. March 24, 1993.
- 86.150-98 Overview, refueling test. April 6, 1994.
- 86.151-98 General requirements; refueling test. April 6, 1994.
- 86.152-98 Vehicle preparation; refueling test. April 6, 1994.
- 86.153-98 Vehicle and canister preconditioning; refueling test. April 6, 1994.
- 86.154-98 Measure procedure; refueling test. April 6, 1994.
- 86.155-98 Records required; refueling test. April 6, 1994.
- 86.156-98 Calculations. April 6, 1994.